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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/829,502	04/22/2004	Takateru Imai	82644	6966

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EXAMINER

KORNAKOV, MICHAIL

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 09/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/829,502

Applicant(s)

IMAI ET AL.

Examiner

Michael Kornakov

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/939,388.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 11/02/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Double Patenting

1. Claims 16, 17 of this application conflict with claims 16, 17 of Application No. 10/829501. 37 CFR 1.78(b) provides that when two or more applications filed by the same applicant contain conflicting claims, elimination of such claims from all but one application may be required in the absence of good and sufficient reason for their retention during pendency in more than one application. Applicant is required to either cancel the conflicting claims from all but one application or maintain a clear line of demarcation between the applications. See MPEP § 822.
2. Claims 1-11 have been cancelled by Applicants in communication as of 04/22/2004. Claims 12-17 are pending and examined on the merits.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claim 13, 16 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The recited step "Roughening" lacks antecedence, since it was never before recited in the claims. The "roughened" surfaces are also indefinite in claims 16, 17,

Art Unit: 1746

since a) these terms lack antecedence and b) it is not clear if the roughening is a separate step of the process or a characteristic of the surface of the apparatus.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 12-14, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Scarola et al (U.S. 5,443,652).

Scarola discloses a method for the cleaning of plastic flakes to be recycled. Before the cleaning is performed the plastic material is typically shredded to form pieces (col. 3, lines 35-46). This reads on the first step of crushing of the instant claim 12. Water is added to the plastic flakes and high shear agitator is provided, so that the contamination is removed from the surface of the plastic flakes. The contaminant containing water is then separated from the cleaned plastic flakes. The shaft is mounted in the washing container of Scarola, the shaft has one or more agitators mounted around the shaft, these parts are inherently “roughened” taking this “roughening” with its common meaning. Means for rotating the shaft provide the rotation of the cleaning vessel, while the flakes are cleaned by water (col.2, lines 15-25, Fig.1, 3, col. 4, lines 37-61). This reads on steps of cleaning and rotating of the instant claim 12.

The plates and walls of container are preferably made stainless steel, which means that the surface of the plates and container walls is roughened. With specific regard to claim 14, the process of Scarola is a continuous process, wherein the water is constantly supplied and drained, thus inherently maintaining the water level sufficient to maintain a ratio of crushed pieces and water (see Fig 3, 4, col.8, lines 46-50, Example 1, 2)

With regard to the specific roughness value of the surface of the container or the surface of rotary body, it is noted that such characteristic does not provide any further limitation to the method claim, and thus is not given a significant patentable weight, as being a feature of a machine for performing otherwise known process, wherein such feature does not present a manipulative difference with regard to the method. Scarola teaches that smaller distances between the wall and the tip of the agitator blade increases the level of shear created by the blade and also increases the level of abrasion created when the plastic flakes strike the wall. The closer the tip of the agitator blades are to the wall of the vessel, the more efficient the abrasion, thus making the walls of the vessel abrasive or roughened. With regard to the values of roughness, it

Is axiomatic that one who performs the steps of a process must necessarily produce all of its advantages. Mere recitation of a newly discovered property or **function** that is inherently possessed by the things or steps in the prior art does not cause a claim drawn to those things to distinguish over the prior art. *Leinoff v. Louis Milona & Sons, Inc.* 220 USPQ 845 (CAFC 1984)

With regard to the cleaning device of the instant claims 16, 17, the vessel of Scarola has an entrance port for the resinous product entrance provided in the upper area of

Art Unit: 1746

one end of the vessel and an exit port for the resin in the lower part of the container (see positions 205 and 206 on Fig.3 and col.7, lines 55-65), it has a water supply port and a drainage port (col.8, lines 21-30 and positions 306, 307, 313 on Fig.4). The rotary body having rotary shaft is in col.2, lines 15-20 (paragraph b), col.4, lines 40-45,) several agitating blades are exemplified in Example 1 in col.9, see also Fig.1, 2, 4. It is understood that the surfaces disclosed by Scarola are rough surfaces buy the virtue of used materials. In some embodiments both the entrance port and port for water supply are on the upper part of the vessel, while the exit port and the drainage port are on the lower [part of the cleaning vessel (col. 2, lines 23-29, 55-60, col.5, lines 36-40, especially, Fig. 3 and col.7, lines 55-68).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

Art Unit: 1746

3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Scarola et al (U.S. 5,443,652).

Scarola discloses the methods steps as discussed in the previous paragraph, and anticipates the method steps. He also discloses the linear speed of the rotary body as instantly claimed (col.5, lines 19-24). Scarola further discloses the ratio between the weight of the crushed flakes and water in Examples 1,2 which is within the claimed range. Scarola is silent about the temperature of the interior of the cleaning device. However, differences in temperature will not support the patentability of a subject matter encompassed by the prior art unless there is evidence indicating such temperature is critical. Since the general conditions of a claim are disclosed in the prior art, to discover the optimum or workable ranges by routine optimization is within the skills of ordinary skilled in the art.

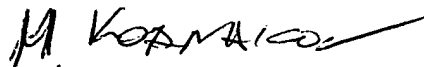
Art Unit: 1746

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Szekely (U.S. 6,372,807) discloses a method and apparatus for conversion (regeneration) of mixed plastic waste.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Kornakov whose telephone number is (571) 272-1303. The examiner can normally be reached on 9:00am - 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Barr can be reached on (571) 272-1414. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Kornakov
Primary Examiner
Art Unit 1746

09/17/2005